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THE BLACK-RUMPED WAXBILL *Estrilda troglodytes*

by Ian Hinze

Description

Length 9.5cm (3³/₄in). The sexes are alike. The upperparts are light brownish grey with delicate vermiculations on all feathers apart from those of the forehead and wing quills. A bright red or crimson eye-stripe runs from the base of the bill and passes above and below the eye and across the top of the ear-coverts before tapering to a point. The cheeks and lower ear-coverts are whitish or pale buff, which extends to the chin and throat before becoming pinkish buff on the lower breast, flanks and upper belly. The lower belly and a patch in front of the vent are reddish pink, the coloration sometimes spreading up over the median parts of the lower breast and, less frequently, reaching the upper breast, sides of the breast and flanks. The under tail-coverts are pinkish white. The under wing-coverts are pale buffish. The rump, upper tail-coverts and tail are black. The outermost pair of tail feathers have white to the outer webs, with the next pair sometimes possessing a small amount of white at the tips of the outer webs. The tail is wedge-shaped when spread. The bill is bright waxy red to crimson. The irides are reddish brown. The legs and feet are dark brown or sometimes brown with a purplish hue.

The juvenile is light drab brown above and pale buffish brown below, with no cross-barring on the feathers. The diagnostic white outer tail feathers are clearly visible. It lacks the red eye-stripe but may possess a slightly darkish area with reddish traces where the stripe later appears. Even at fledgling age and while still possessing conspicuous bluish white gape tubercles the red traces are sometimes clearly evident. The bill is black.

Goodwin (1982) reported the nestling as at first having yellowish skin and pale bluish down, but those I examined were flesh coloured and completely naked. There is a semi-circular gape mark either side of the upper mandible and two bluish white globules, one on the 'join' and the other immediately in front of it on the lower mandible.

Field guide

A tiny brownish grey bird with a red bill and red eye-stripe and a black, white-edged tail that is frequently jerked from side to side. It can be distinguished from the Common Waxbill *E. astrild* and the Rosy-rumped Waxbill *E. rhodopyga* by its black rump and tail and from the Arabian Waxbill *E. rufibarba* by its red belly patch, pink tinged body plumage and its entirely red bill.

Voice

Its calls are rather loud and harsh for a bird so small, with “*cheu-cheu*” or “*chit-chit*” being the locomotion-intention and/or short distance contact calls. There is a louder, upwardly inflected “*cheeer*” or “*chee-ey*”, which is uttered in alarm and possibly some other states of excitement. One of my own birds uttered “*Chew-tchŭ-tchŭ*” and “*Chet-ow-uh-eee Chet-ow-uh-eee*” with a hard “*Chi*”. Defensive or aggressive threats give rise to a harsher but less loud and more buzzing “*cheer*” or “*cheea*” (Goodwin, 1982). Flocks in flight emit “*tiup-tiup-tiup*” calls (Bannerman, in Goodwin, 1982) and a characteristic drawn-out “*tsooeet*” is frequently uttered (Serle et al., 1977; and pers. obs.). Goodwin (1982) found the nest call used, and occasionally when changing over at the nest during incubation, was a soft murmuring twitter, “*tswee-tswee-tswee*”. The song of the male is a loud, explosive and rising (on second note) “*tche-tcheeer!*, *chee-eeer!*”, or “*t’chu-weee*”, but with the second note descending. The song of the female is “*pwich! cheee*” with the second note inflected, or the first explosive note repeated, i.e. “*pwich! pwich!*” I have heard very young begging nestlings emit “*pet-uh-pet-uh-pet-uh-pet-uh-pet-uh*”, with older nestlings emitting “*tch-chew-tch-chew-tch-chew*” and still older ones “*tch-zrr-tch-zrr-tch-tch-tch-zrr-tch-zrr*”.

Distribution

Senegal (where it is widely but patchily distributed in the north and south), The Gambia and Guinea east to southern Mali, Burkina Faso, Ghana, southern Niger, northern Nigeria, northern Cameroon, southern Chad, the Central African Republic, extreme northern Congo and north-east Democratic Republic of Congo, northern Uganda from West Nile, Wadelai and Kidepo Valley National Park south to Kabalega Falls National Park and Kumi, Sudan north to Darfur and Sennar, Eritrea and north-western Ethiopia, and western Kenya (Siaya and Kisumu east to Ahero and north to Ukwala).

Status

Widespread, often a resident but absent from some of its breeding places in the dry season.

Introduced distribution

It was introduced onto Puerto Rico in the mid-1960s and onto Guadeloupe later that same decade. It was also introduced successfully onto the Hawaiian Islands (Hawaii and Oahu) (Lever, 1987), but unsuccessfully onto Tahiti (Long, 1981).

It has been established on Basse-Terre, Guadeloupe, since at least the late 1960s and also occurs on Grande-Terre, but in smaller numbers. On Guadeloupe the bird feeds largely on the seeds of *Panicum maximum*, which was introduced long ago from Africa and can be found along roadside verges and abandoned cane fields. Both H.A. Raffaele and the American Ornithologists' Union (in Lever, 1987) confirmed it is established on Puerto Rico.

Birds on the Hawaiian Islands appear to be established in the Kapiolani Park-Diamond Head area where they were observed every year from 1966-1976 and were slowly increasing (Hawaiian Audubon Society and Pyle in Long, 1981). They are likely the progeny of released or escaped birds, in 1965, on the island of Oahu (Berger in Long, 1981). C.F. Zeillemaker and J.M. Scott recorded the species as local and uncommon in dry lowland residential and community parklands on Oahu (in Lever, 1987) and, in 1983, the American Ornithologists' Union reported that it occurs in small numbers on Oahu and Hawaii.

Eastham Guild released birds on Tahiti in 1938 and they were reported by him to have nested and reared young there. Two years later he reported that they were still established, but later records point to the introduction as having been unsuccessful (Long, 1981).

This species has also been recorded almost annually since 1975 on the Rock of Gibraltar and it was thought possible it and other waxbills, derived from released or escaped cage birds, were consolidating their presence in Iberia (J. E. Cortes et al. in Lever, 1987).

Writing more recently, about exotic birds in Portugal, Costa et al. (1997) noted it has been recorded at several places in the Algarve, listed it as probably breeding in Portugal and also mentioned that it has been recorded at several places in Galicia, north-west Spain, close to Portugal's northern border. Snow and Perrins (1998) state it and the Crimson-rumped Waxbill have recently been reported breeding in the Algarve and hybrids also occur.

Habitat, general behaviour and feeding

It is found at 750m-1,500m (approx.2,450ft-4,950ft) (van Perlo, 1995) inhabiting grassy savannahs, scrub and grassy areas near water, open country with thorn scrub, marshes and is occasionally spotted on the edge of cultivation, but it is not generally found in the close vicinity of human habitations. Usually it is recorded in pairs, small groups or may occasionally

be spotted in large flocks, often with other waxbills. Gore (1990) reported up to 50 birds were observed gathering at laterite pools, between August-November, at Bansang, Gambia. However, between August-October in the Banjul area, parties of up to only 10 birds were recorded, indicating some dispersal in the non-breeding season. Its tail is often flicked from side to side when excited or alarmed. It feeds principally on grass seeds, both on the ground and from growing vegetation, and the growing tips of young grass. It is very agile among vegetation and, when feeding from grass panicles, may hold them underfoot. Small insects, such as midges, are also taken.

Courtship display

The male picks up a piece of nesting material (usually a long grass stem) by one end in his bill, flies up to a branch and lifts his head upwards to an angle of 60°-70°. The plumage on the belly is slightly fluffed out but otherwise the feathers look slick. If the female is alongside the male he will angle his tail towards her, but if she is immediately in front, the tail is held straight. The male then proceeds to bob stiffly up and down by bending and straightening his legs but does not let go of the branch with his feet as he does so. During this display the male repeats his song and glances in the direction of the female. Kunkel (in Goodwin, 1982) mentioned that the female may sometimes display but that this is usually done without singing. The display does not immediately lead to copulation, this takes place in the nest.

Nesting

The ball to pear-shaped nest is usually built on the ground, at the base of a clump of long grass or a small bush and made of dry grass heads (Shuel in Goodwin, 1982) and, based on my captive studies, likely dry grass stems and grass leaves, even fresh ones if they have been found broken or uprooted. There is often a cock-nest built on top and the entrance to the real nest is usually by way of an entrance tube. The nest is often lined with soft plant material and/or a few feathers and so, too, is the cock-nest. Both the outside of the real nest and the outside and inside of the cock-nest may be decorated with bits of dried earth, excreta, pieces of eggshell, dead beetles and even the corpse of a nestling.

The eggs usually number four to five. Both sexes take turns to incubate them for about 11 days and both brood the young, which are fed primarily on tender grass seeds and small insects. Fledging occurs at 17-20 days but the young are led back to the nest to roost and for protection for a few days afterwards. Both parents feed the young until they are independent. It is believed the species is a breeding host of the parasitic Pin-tailed Whydah *Vidua macroura*.

Captive observations

It is a frequently imported species but has an extremely poor breeding record, in spite of having been bred first in the UK as long ago as 1903, by Lady Dunleath (Coles, 1986). It is a very timid, gregarious species that is a delight to possess. It is attractively coloured without being overly gaudy, peaceful and vivacious. An obvious drawback is acquiring a true pair, though the main reason for it not being domesticated is due to the lack of interest in its propagation because of its common availability, cheapness to buy and the desire of many aviculturists to possess less frequently available and/or more colourful species. Insufficient livefood of the correct type and quantity is also blamed for breeding failures, but this species can be reared on the milky green seeds of some indigenous plants and grasses, as well as eggfood, once it has become accustomed to it.

Nests containing eggs and/or young are frequently lost due to interference from other species (though I have witnessed a particularly determined male chase off a rather too inquisitive male Blue-headed Cordon-bleu *Uraeginthus cyanocephalus*), nest inspection by the owner or by being washed out in a storm if nesting in an outside aviary. Nests (complete with cock-nest) are frequently built on the ground out of dried and fresh grasses and coconut fibres. If dried grass is placed in the corner of a birdroom the nest starts off as a depression caused by the male pressing his body downwards, with both sexes then constructing the sides and roof. Dried grass is collected and bent in semi-circular fashion, by the bird pushing up with its bill and the crown of its head, until eventually the front (or side) opening gradually becomes smaller and smaller in a concentric circle-like manner.

Nests may be decorated on the outside with charcoal, dried earth, dried excreta, small pieces of gravel, the corpse of a nestling, tiny white shells, bits of tissue paper - in fact, anything the birds take a fancy to. A male in my collection showed particular excitement, fanning and twitching his tail from side to side, on finding the tail feather of a Goldfinch *Carduelis carduelis* and, holding it by the quill, succeeded in pushing it into the fibres of the nest. This 'excitement' behaviour was taken to its highest extent when the corpse of a Gold-breast *Amandava subflava* nestling was discovered on the floor. The male which found it was about to clasp it in his bill when he was suddenly joined by two other male Black-rumped Waxbills. Immediately a tug of war ensued, until one of birds emerged victorious - for a moment!

On flying off to his nest he was pursued by the other two birds and no sooner had he placed the corpse onto the wall of his nest when it was stolen by one of the pursuers. The corpse was carried first this way and then the other as each bird took it in turns to quickly snatch it away at the first opportunity. Eventually calm resumed and the battered corpse was wiped all over one nest, right up to the cock-nest, before finally being embedded in the outer wall.

On some occasions a 4in-5in (approx. 10cm-12.5cm) diameter 'territorial' semi-circle was made around each nest and this contained pieces of compost or charcoal. When I opened up an old nest for examination I found it had been lined with feathers and pieces of charcoal and/or compost. On another occasion I observed a male using saliva and other mouth contents, such as eggfood, as well as fresh faeces, to wipe into the outer layer of its nest. On examining the nest after the young had fledged I was struck by how heavier than normal it seemed. I had great difficulty in breaking the nest open as the coconut fibres used in its construction had been cemented together. To date, this is the only time I have seen such a nest.

The instinctive drive to decorate the nest is a strong one and birds that instead of building their own nest utilise a wicker basket, often spend considerable time and energy trying to place various items on the outside. These invariably fall off because of the shape of the nest and the fact that wicker material is too hard to allow such items to be impregnated into it. Dry fine grass is especially good for lining the insides of wicker baskets. A wicker basket in close proximity to one being nested in may be used as a substitute cock-nest, with the male bird lining it and even sitting in it while his mate sits in the real nest.

When they first emerge from the nest fledglings may be clumsy fliers and hardly get airborne. Often they crash-land on the floor and are quickly joined by their concerned parents, and conspecifics if they are housed together, which offer protection and encouragement. Within a day, however, they are usually competent enough to fly to a perch. They are also reasonably steady and it is only after a few days of liberty from the nest that they take on the flightiness of their parents. The parents entice them back into the nest for the first few days after fledging or sometimes for only the first day. Birds may sleep all in a line on a perch during the day, but only in their pairs or small groups of about four individuals during the night. A juvenile male in my collection was observed singing and performing the courtship display, and I have also witnessed a juvenile standing its ground and then bettering an adult at the food dish.

This is potentially a really good beginner's bird. Providing keepers give it the attention it deserves I see no reason why it cannot be bred in cages. The minimum birdroom temperature in which it should be kept is 15°C (60°F). The staple seed mixture for my birds consists of a Foreign Finch mix and a British Finch mix blended together. Prior to and then throughout the breeding season very small livefood, such as fruit-fly larvae and soft, white-skinned mini-mealworms, should be provided fresh at least twice a day, as well as daily amounts of fresh eggfood and seeding grasses. Over the following weeks the livefood should be very gradually withdrawn until the birds have only the staple seeds, seeding grasses and eggfood to consume.

Eventually it should be possible to breed one's birds without any livefood at all.

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PARENT REARED AFRICAN JACANAS *Actophilornis africana* AT DISNEY'S ANIMAL KINGDOM

by Susan Congdon

Relatively easy to house given the right habitat, the challenge with keeping African Jaçanas has been successfully breeding and rearing them. Disney's Animal Kingdom (DAK), Florida, USA, is one of the few institutions to have had success hand-rearing jaçana chicks, and is now one of even fewer to have had them successfully parent reared.

During our first breeding season, their eggs disappeared from the large free-flight mixed species aviary in which the jaçanas are housed, and a time lapse camera revealed that these eggs had been destroyed by rodents and a breeding pair of Black Crakes *Limnocolax flavirostra*. As no US institutions were at that time successfully breeding African Jaçanas, we made the decision to remove all eggs and hand-rear the chicks. However, by late 2000 we noted that the numerous jaçanas that we had raised by hand were showing signs of imprinting, likely due to the high level of interaction just after hatching, when attempting to get the chicks to eat (see Congdon and Zima, 2000). As a result, we were determined to allow the parents to rear their own chicks during the next breeding season. As we had produced 13 chicks from the only wild-caught pair that was breeding in the USA, we decided to take the risk and leave the eggs with the parents. We made one other management change for that breeding season, we removed the breeding pair of Black Crakes from the aviary and instead housed an all-female group.

The first clutch that was left for the male to incubate was laid in January 2001. The male sat much tighter than he had in the past and was much more defensive of the nest site. The first egg hatched under the male on January 27th. The chick hatched a full day before the next two; however, the male appeared more interested in the unhatched egg than in the chicks. Due to his lack of attention, the chicks were removed for the night and taken to the nursery where they were given subcutaneous and oral fluids and piperillian. The next morning the chicks were placed back on the nest and the remaining egg was removed. Later that day, the male was observed carrying the chicks under his wings and flew to the female when she called, apparently dropping the chicks as he did so, which fell into the pond below containing a species of large tilapia (fish). The chicks were not seen again.

It was not long before the male was incubating another clutch. On March 4th the first chick hatched, again a full day before the remaining chicks hatched. Like before, the male attempted to fly with the chicks tucked under his wings and they dropped into the pond. On this occasion, a large tilapia was observed to swallow one of the chicks but then spat it back out. This

time, three of the four chicks were recovered and both the male and the chicks were moved to our off-exhibit Avian Research Center (ARC), where the parent-rearing process continued. Here the chicks initially failed to gain weight and were rotated through the nursery for supplemental feeding, but with one or more of the chicks always being left with the adult. We came to the conclusion that the earlier chick mortality was due to the chicks getting a little chilled, as despite the room being heated, it has a concrete floor. Subsequently, a heater was placed on the floor to warm that part of the room. By day six the male again had all three chicks and was successfully caring for them.

When the chicks were about 60 days old and eating on their own, the male was released back into the aviary. Within a few days he was again sitting on eggs, but unfortunately this third clutch disappeared shortly after the fourth egg was laid. On June 28th a fourth clutch of eggs hatched in the aviary. Due to construction work, the male and chicks were immediately moved to the ARC. This time the chicks gained weight and did not require supplementary feeding. This was most likely due to the combination of warmer daytime temperatures and the heating unit on the floor.

Around day 70 the male was again returned to the aviary while the chicks remained in the ARC. At that point the decision was taken to remove all further eggs due to possible over-representation of this male and female's offspring in US institutions.

Copenhagen Zoo, Denmark, succeeded in producing parent reared chicks at the same time and we exchanged birds so as to be able to introduce fresh genes into the US population. The two males that we have taken great pains to acquire from Copenhagen will be paired with females that are unrelated to our breeding pair, to ensure genetic diversity. Our breeding female has since died and the former breeding male, because he is related to most of the females in the USA, will in future be used only as an exhibit bird.

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HOW DO TWO STURNIDS, *Leucopsar rothschildi* AND *Gracupica nigricollis*, GET ALONG TOGETHER IN LIMITED SPACE?

by Walter A Sontag, Jr.

Introduction

In my study of habitat use by *Leucopsar*, Bali Starlings *Leucopsar rothschildi* were kept together in an aviary with another (though non-sympatric) south Asian sturnid, the closely related Black-collared Starling *Gracupica nigricollis* (Sontag, 2001b). The former are known to be highly aggressive towards conspecifics (e.g. Sieber, 1978; Sontag, 2001b). In order to avoid or reduce intra- and potential interspecific aggression the aviary was spacious and highly structured. Moreover, the number of inhabitants never exceeded six individuals. No severe aggression was observed between the two species.

The Black-collared Starlings generally spent more time on the ground layer than *L. rothschildi*, but the frequency of individual ground visits was distinctly higher in the latter (cf. Sontag, 2001b). This study addressed the question if and what type of correlation may exist between these two sturnids when sharing the same aviary? Theoretically, Bali Starlings might use the ground space more when Black-collared Starlings spend more time on the ground, or the opposite may be the case. Note also that in the wild mixed aggregations of starling species have often been described. For instance, Brahminy Starlings *Sturnus pagodarum* associate freely with Grey-headed Starlings *S. malabaricus* when feeding on flowering and fruiting trees and with Asian Pied Starlings *S. contra*, Common *Acridotheres tristis* and Jungle Mynahs *A. fuscus* when hunting grasshoppers etc. on the ground layer (Ali & Ripley, 1972: 161); *S. pagodarum* also roost communally with Rosy Pastors *S. roseus* and Common Mynahs (Ali & Ripley, 1972). In Thailand I have seen mixed starling associations such as *tristis/javanicus* (frequently), *tristis/javanicus/nigricollis* (regularly in wet cultivated areas also intensely used by *contra*, Bang Pra area, s. e. Thailand) and *tristis/javanicus/contra* (regularly, Chiang Mai district) (Sontag, 1997). Bali Starlings were recorded using the same roost sites as Asian Pied Starlings and Black-winged Starlings *A. melanopterus* (Ash, 1984). On the other hand, Sieber (1978) stated that the latter was a food competitor of *Leucopsar* in the Bali Barat Nature Reserve.

As the Bali Starling and Black-collared Starling are close relatives, I first discuss phylogenetic aspects. I will present information from the literature and my own observations. This may help to better understand (a) some similarities and discrepancies between the two species, including

habitat use and (b) corresponding properties that are potentially relevant to interspecific behaviour. Secondly, I will report on the interspecific impact in the study aviary, i.e. in the particular environmental (= experimental) design to which the mixed species groups were exposed. Such knowledge is useful for the aviculturist when maintaining mixed species groups.

The relationship of both species

Both belong to a complex of ca. 25 sturnids grouped around the genera *Sturnus* and *Acridotheres*. The members of this group typically occur in open habitats, move largely on the ground or exploit this part of the environment, have a tendency for ‘prying’ (i.e. ‘open-bill probing’, due to anatomical adaptations to the jaw muscles and skull), and form flocks (Beecher, 1978; Sontag, 1992; Wickler, 1961; and others). Harrison (1963) described characteristic behaviour patterns and compared them interspecifically in order to propose a reliable scheme of the relationships within the group. In a parasitological investigation apparently overlooked by Feare & Craig (1998), unknown Ischnocera have recently been described from four closely related sturnids including the Bali Starling and the Black-collared Starling (Mey, 1989). Mey arranged these mallophags according to their morphological characters: with respect to the male genitalia (a key mallophagan identification feature) the feather louse discovered on the Black-collared Starling deviated strikingly from the mallophaga found on the other three sturnid species, all of which are attributed to the genus *Leucopsar* in Wolters’ (1975-1982) checklist. Within this sub-set, the Ischnocera collected from the Bali Starling clearly differed from the mallophaga settling on the Black-winged Starling and the Vinous-breasted Starling *A. burmannicus*. However, *Sturnidoecus stresemanni*, the Bali Starling feather louse, differed completely from the other mallophaga in having a reduced subgenital plate and in its overall colour (almost perfectly white) (Mey, 1989). This fits in with the set of particularities found in *L. rothschildi*, i.e. its appearance, peculiar bobbing style (Harrison, 1963; see below), shyness in the wild (different from Black-winged Starling, Sieber, 1978), and its probable adaptation to living in open forest (Sontag, 2001b).

My own observations made in the aviary and in the field (Nepal, Thailand) support and even extend Harrison’s contribution concerning the nodding display. I saw the up-down movements of the head and bill along the underparts in the Common Mynah and Jungle Mynah in Nepal and in the Common and White-vented Mynah *A. javanicus* in Thailand (taxonomy according to Ali & Ripley, 1972 and Lekagul & Round, 1991). Moreover, in 1988 I observed a single Vinous-breasted Starling kept in a cage move its head in a similar manner (see photo p.163). During later fieldwork in Thailand I confirmed this type of nodding display in that species (which, as

mentioned above, Wolters (1975-1982) had placed in the genus *Leucopsar* as he had the Black-winged Starling). Harrison (1963), however, had already reported the same nodding behaviour by the latter. Thus, the Bali Starling is the only known member of the *Sturnus-Acridotheres* complex *sensu* Sontag (1992) whose bobbing style involves the characteristic 'head back movement' and 'body up thrusts'.

Specific behaviours of the Black-collared Starling

I studied Black-collared Starlings (four individuals + one juvenile from a 'natural brood' that died before fledging) from 1985-1988 at the Institute for Comparative Ethology of the Austrian Academy of Sciences in Vienna. Thereafter, I observed this species under natural conditions in the wild in Thailand.

To the best of my knowledge, the 'bobbing' display of the Black-collared Starling is completely different from the displays of all the other sturnids of the aforementioned group. This species raises the head feathers, bristling the black feathers on the back of the neck, lowers the body, swells out the plumage of the underparts, thrusts the bill 'cautiously' and repeatedly down towards the substrate, and coos 'hoarsely' and in a low tone (see photo p.163). This behaviour is presented close to the companion. However, no copulation has been observed at this time. The slow motion of the 'bowing movement sequence', the type of 'cooing' and the momentary maintenance of the bowed position clearly differentiate the display from the nodding modes mentioned earlier.

In another characteristic display Black-collared Starlings behave in a conspicuous manner based on visual and acoustic elements. An individual screams harshly and very loudly, opening the bill widely and directing it forward, i.e. $\pm$ parallel to the ground. The white feathers on top of the head and the black plumage at the back of the neck are ruffled, and the plumage of the head and underparts is raised. Simultaneously, a short wing quiver-beat was often observed. Generally speaking, wing-flicking and sideward tail-flicking were frequently observed under captive conditions. Such behaviour rapidly modifies the presentation of the complex blackish-greyish-black-white wing pattern, the blackish rectrices with the white tail-tip and the white rump-marking might suddenly become visible.

A striking feature of the Black-collared Starling is its voice. While the above mentioned, strange nasal sounds - uttered in the bowing display - are soft, three categories of high intensity vocalizations may roughly be distinguished mainly by ear: (a) loud 'pure-tone' fluting, (b) vigorous harsh 'noisy' screaming (cf. above), and (c) harsh high-amplitude screaming (very loud) when individuals join, rejoin or settle at a site (however, this behavioural complex remains unclear). More detailed research may lead to an increased

number of distinguishable high-intensity vocalisation classes and find connections between (b) and (c).

Apart from potential differences between captive and free-living individuals, both the bowing display and the acoustic behaviours mentioned may possibly occur in different contexts and accordingly may vary in their particular expressions.

On one occasion I noticed a Black-collared Starling perform an anting movement in the aviary. Such behaviour was observed in a group of three (one adult, two young) wild and four released captive-bred Bali Starlings, which were 5m-6m (approx. 16ft-19ft) above the ground in a Pilang tree *Acacia leucophloea* (van Balen, 1996).

Rationale of the experimental design, aviary, subjects and groups, statistical analyses

Based on the assumption of constant aviary and keeping conditions, a clear positive correlation in using the same 'enclosure segments' by both species would be interpreted as interspecific attraction; on the other hand, a clear negative interspecific relation in habitat use would indicate that at least one species avoids the other or both do. A third possibility was that there would be no clear trend, which would be equally intriguing. In this case an interspecific connection would be largely lacking, especially when overt conflicts (aggression, flight, etc.) were rare. Floor use appeared to be a good measure for testing this issue. Stays on the floor vs. the other parts of the aviary were recorded for both species.

The starlings studied were housed in a partly roofed, spacious, richly structured aviary subdivided into two sections at the Institute for Comparative Ethology of the Austrian Academy of Sciences in Vienna (for details see Sontag, 2001b). Food was offered on the floor and on a board at an upper level. The structural variety provided an abundance of environmental conditions in the aviary which were intended to reduce aggression.

Subjects (six individuals), group compositions, study periods and chronological order were the same as reported by Sontag (2001b). Three mixed species groups were studied: Group 1 consisted of an adult pair of Bali Starlings and an adult pair of Black-collared Starlings (the Bali Starling nestlings were disregarded); Group 2 consisted of the same individuals plus the two recently fledged offspring of the Bali Starlings; Group 3 consisted of the aforementioned pair of Black-collared Starlings and the two by then young (subadult) Bali Starlings.

The cumulative time spent on the ground per observation session was determined for each sub-group (i.e. adult Black-collared Starlings; adult Bali Starlings; young Bali Starlings). The result from the summation of the individual ground stay durations of the sub-group, independent of whether

one or both members of the sub-group were on the ground (i.e. if both individuals were simultaneously on the ground, this period was taken into account only once). This calculation was possible because all sub-groups consisted of the same number of individuals (two). Correspondingly, one ground visit was defined as the continuous presence of a sub-group on the ground (again independent of whether one or both members of the sub-group visited the ground). The respective number of observation sessions is given in the tables and the text. The potential within-group-relations between the ground stay values of both species were tested using Spearman's coefficients of rank correlation. For all statistical analyses SPSS was used.

Total-time budgets of ground visits

As pointed out earlier (cf. Sontag, 2001a), in total, Black-collared Starlings spent more time on the ground than Bali Starlings. However, this difference was statistically significant only in half of the interspecific comparisons. This may have been due partly to the difficult observation conditions: free-running dogs were often present and disturbed observation sessions had to be terminated and excluded from further investigation, reducing the data set. This handicap becomes evident when reconsidering the data of Groups 1 and 2. When both study groups are analyzed separately, no statistical difference is detectable between the Black-collared Starlings and the adult Bali Starlings in either group: the significance level is missed by far in Group 1 ($p = 0.245$, $N_1 = N_2 = 20$ sessions; U test, two-tailed), whereas in Group 2 the difference is marginally short of being significant ($p = 0.065$, $N_1 = N_2 = 12$ sessions; U test, two-tailed). Pooling the data of both groups, however, yields a statistically substantiated distinction between the same individuals based on the same test algorithm ($p = 0.034$, $N_1 = N_2 = 32$ sessions).

In order to roughly assess the potential importance of the ground section in aviary use, the arithmetic means of the time spent on the ground (in percent of the observation time) are given. The range was between 15.9% and 22.6% in the Bali Starlings (adults: 19.6 ± 13.9 SD, 15.9 ± 10.0 SD; juveniles: 22.6 ± 16.9 SD, 19.0 ± 14.0 SD), and between 28.6% and 34.1% in the Black-collared Starlings (28.6 ± 23.3 SD, 28.6 ± 18.4 SD, 34.1 ± 20.5 SD).

Correlations of cumulative ground stay time: yes or no? (Table 1)

Surprisingly, no negative correlation coefficient was ever calculated for the cumulative ground stay times of the compared birds (including the pooled data of different groups). Rather, only definite positive correlation coefficients ($r_s = 0.150$ to 0.608) occurred. Thus, apart from the respective absolute total-time sums, this expresses the following tendency: the more time the Black-collared Starlings spent on the ground, the more so did both

the adult and juvenile Bali Starlings (and *vice versa*) in all comparisons. Nonetheless, for most comparisons *no* significant correlation could be confirmed (including the comparison between the adult and juvenile Bali Starlings). A positive correlation coefficient for the time-sums was statistically relevant only between the Black-collared Starlings and the juvenile Bali Starlings, rather weakly in Group 3 ($p < 0.05$), and very strongly in the lumped Groups 2 + 3 ($p = 0.005$), although the coefficient itself remained rather low ($r_s = 0.557$; theoretically 1 would be the highest possible value) (Table 1). Why did a relationship exist just between the young Bali Starlings and the members of the other species? Perhaps young birds are *per se* more 'curious' than older individuals and their exploratory behaviour was facilitated or even partially elicited by the - generally speaking - non-hostile, different looking Black-collared Starlings.

Correlations of ground visit frequencies: yes or no? (Table 2)

Not a single case showed evidence of a significant rank correlation between the ground visit frequencies of the compared group members, including the combined data of different groups. Moreover, with one exception, the correlation coefficients were very low (i.e. $r_s = < 0.16$), and in one case even marginally negative. The only comparison which may suggest a (positive) trend was that of the Black-collared Starlings and adult Bali Starlings in Group 2 ($r_s = 0.495$, $p = 0.102$).

These results fit in with the fact that the individual ground visits of the Black-collared Starlings were highly variable in duration, while those of *Leucopsar* were short and rather constant (Sontag, 1992, 2001b).

Overt interspecific effects

Both sturnids were observed on the ground at the same time. Some incidents suggest that one species occasionally caused the other to take flight from the floor of the aviary. In one case, for example, a Bali Starling flew up and called harshly; immediately, a Black-collared Starling that was also on the aviary floor was seen flying off (Group 2). Shortly after the hatching of the Bali Starlings, interspecific antagonistic interactions frequently took place between the adult birds, and the Black-collared Starlings often withdrew when confronted by their smaller sized counterparts. Unfortunately, I did not make a separate note of which individuals were involved in these interactions.

General discussion and conclusion

On one hand, starlings (Sturnidae) represent a very social group of birds that often form interspecific aggregations (cf. Feare & Craig, 1998; also see Introduction); on the other hand, severe intraspecific aggression has been

reported in the Bali Starling (e.g. Hughes & Turner, 1975: 116; Sieber, 1983; Sontag, 2001b). An example of fatal aggression can be added from my own experience with groups of another sturnid, the Brahminy Starling. The birds were kept in spacious indoor-outdoor aviaries measuring ca. 4.5m x 3m x 2m (approx. 14ft 6in x 9ft 9in x 6ft 6in) at the University of Mainz and in a much larger enclosure (the inside of which was hexagonal and the outside pentagonal with dense vegetation) at Mainz Municipal Park, Germany. At least four of the deceased, crested, at least nearly adult individuals, died as the result of intraspecific fighting. Attacks were initiated by short singing, which was followed by a physical assault. An attacking individual selectively pecked at the head of the conspecific. In at least one case, attacks continued on the corpse. The case of *S. pagodarum*, which also belongs to the *Sturnus-Acridotheres* complex, stresses the importance of comparative studies in systematics and phylogeny among that group.

Based on the general behaviour patterns, the mixed species study groups appeared to coexist without problems. These semi-qualitative observations require a quantitative method to verify the general impression. Due to methodological restrictions, only a few measures could be selected. Both the cumulative ground use periods and ground visit frequencies seemed appropriate for examining the potential connection between the behaviour of the sub-groups. First, the cumulative and frequency measures never provided the slightest evidence of any true trend in a sub-group to avoid visiting and using the aviary floor when the coexisting sub-group(s) spent more time at floor level (or went there more often; note the relations of the individual ground visit durations to the total times on the ground, Sontag, 2001b). Second (and surprisingly), most comparisons also yielded no positive connection between the sub-groups. Furthermore, the absence of detectable behavioural relations was more prominent in the case of ground visit frequencies. For this parameter, no statistically significant value occurred at all; its correlation coefficients were much lower in almost all sub-group comparisons than those of the cumulative ground stay times (see Tables 1 & 2). In summary, the results support the idea that the sub-groups representing different species obeyed their own activity patterns rather than the impact of the other group members. Accordingly, the fact that both species are closely related biased the interaction between these sturnids only minimally if at all. This finding is important in the light of the strong intraspecific aggression that often has been described in *L. rothschildi* (see above). The results are also in accordance with literature reports that coexistence between different sturnids is a widespread phenomenon (see above). This may be due partly to similarities in the flocking tendency within this family and similar roosting requirements and feeding niches (see Feare & Craig, 1998).

Based on the presented data, other interpretations cannot be excluded *per se*. However, there is not sufficient evidence for an antithetic conclusion. The exception was the juvenile Bali Starlings that tended to spend more time on the ground, the more the Black-collared Starlings used that part of the aviary, which remains to be explained. The juvenile birds might have been attracted to inspect the ground segment of their enclosure by the presence there of the similar-sized Black-collared Starlings. This potential attraction may be related to the fact that the latter species is less conspicuous on the ground than the Bali Starling.

Summary

Sturnids of the *Sturnus-Acridotheres* complex *sensu lato* (= *S.-A.* complex) are social birds and often form mixed associations with members of the same species complex under natural conditions. The Bali Starling, however, is known for its severe intraspecific aggression. Examples of fatal intraspecific aggression under aviary conditions have been reported, the species involved being the Brahminy Starling, also a member of the *S.-A.* complex.

Three groups of Bali Starlings and Black-collared Starlings, two species which belong to the *S.-A.* complex, were kept together in a spacious, richly structured aviary and coexisted without any major problems. Here, cumulative ground stay time and the ground visit frequency were the parameters selected to quantify habitat use, specifically whether the activity of one species was influenced by the other. With two exceptions no behavioural connections were evident between the compared group members (not even between the adult and juvenile Bali Starlings). The two significant, positive cases (Spearman's coefficients of rank correlation) were for the cumulative ground stay times of the Black-collared Starlings and juvenile Bali Starlings in Group 3 and Groups 2+3 (combined). Thus, both sturnids generally tended to follow their own activity pattern.

In addition, the phylogenetic relations of both species and closely related allies within the *S.-A.* complex are discussed including parasitological findings from the literature. Different bobbing and nodding displays occur in the group; the *A. burmannicus*, *G. nigricollis* and *L. rothschildi* patterns are characterised. Specific behaviours of the Black-collared Starling are presented, based partly on studies in the field.

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Table 1. Spearman's coefficients of rank correlation r_s for total time spent on the ground per observation session by Black-collared Starlings and Bali Starlings in different groups (including data combined groups). See methods. N number of sessions, p probability of error. **Significant** probabilities in **bold type**.

Group 1			
Black-collared vs ad. Bali	N=20	$r_s=0.150$	$p=0.527$
Group 2			
Black-collared vs ad. Bali	N=12	$r_s=0.455$	$p=0.138$
Black-collared vs juv. Bali	N=12	$r_s=0.462$	$p=0.131$
ad. Bali vs juv. Bali	N=12	$r_s=0.448$	$p=0.145$
Groups 1 + 2			
Black-collared vs ad. Bali	N=32	$r_s=0.263$	$p=0.146$
Group 3			
Black-collared vs juv. Bali	N=12	$r_s=0.608$	$p=0.036$
Groups 2 +3			
Black-collared vs juv. Bali	N=24	$r_s=0.557$	$p=0.005$

Table 2. Spearman's coefficients of rank correlation r_s for ground visit frequencies of Black-collared Starlings and Bali Starlings in different groups (including data combined groups). See methods. N number of sessions, p probability of error.

Group 1			
Black-collared vs ad. Bali	N=20	$r_s=0.063$	$p=0.792$
Group 2			
Black-collared vs ad. Bali	N=12	$r_s=0.495$	$p=0.102$
Black-collared vs juv. Bali	N=12	$r_s=0.011$	$p=0.974$
ad. Bali vs juv. Bali	N=12	$r_s=0.039$	$p=0.905$
Groups 1 + 2			
Black-collared vs ad. Bali	N=32	$r_s=0.154$	$p=0.400$
Group 3			
Black-collared vs juv. Bali	N=12	$r_s=0.127$	$p=0.694$
Groups 2 +3			
Black-collared vs juv. Bali	N=24	$r_s=0.101$	$p=0.639$



Walter A Sontag, Jr.

Probably the first photo of a Vinous-breasted Starling 'nodding'. It was housed with Black-collared Starlings in an aviary in Thailand



Walter A Sontag, Jr.

A Black-collared Starling in its 'bowing' position while its companion stands besides it.

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BREEDING THE SCARLET IBIS *Eudocimus ruber* AT BELO HORIZONTE ZOO, MINAS GERAIS, BRAZIL

by Cristiano Schetini de Azevedo, Ângela Bernadete Faggioli
and João Bôsko Ferraz

Introduction

The red or reddish plumage of the Scarlet Ibis *Eudocimus ruber* always arouses interest. Owing to its scarcity in bird collections here though, it is not well known (Antas, 1979). A bird characteristic of mangroves, it was found along the Brazilian coast, from Santa Catarina in the south, to Amapá in the north (Teixeira & Best, 1981). However, despite suitable ecosystem stretching along almost the entire Brazilian coast, there are no records of Scarlet Ibis in the States of Espírito Santo and Rio Grande do Norte (Marcondes-Machado & Filho, 1989). In the past, this species nested in Guanabara Bay, Rio de Janeiro, but due to hunting and habitat loss, the ibis were forced to occupy only the northern part of their original distribution. Nowadays, the Scarlet Ibis is a threatened species in Brazil (IBAMA, 2002).

Reproduction is a rare event in captivity in Brazil. According to records in the birds census, only São Paulo Zoo (SP Zoo) 1981, Porto Alegre Zoo (RS Zoo) 1983 and Emílio Goeldi Museum (EGM) 1999 have achieved reproduction in recent years, with one chick being reared in each institution. Earlier, Rio de Janeiro Zoo (RJ Zoo) in the 1970s, obtained a good rate of reproduction, with 15 chicks reared (Antas, 1979). The Scarlet Ibis is a species that nests colonially, but is extremely territorial, defending its nest from conspecifics. At the above institutions, the number of individuals kept was not high, but sufficient (eight SP Zoo, 10 RS Zoo, 17 EGM and 30 RJ Zoo) to trigger successful reproductive behaviour. Belo Horizonte Zoo (BH Zoo) has three Scarlet Ibis, a male which has been here since 1985, and a pair which arrived in 2000.

The first breeding of *E. ruber* at Belo Horizonte Zoo

The enclosure

The Scarlet Ibis are kept in a large, outdoor enclosure 590 sq m (approx. 6,350sq ft). It has a freshwater lake 113sq m x 20cm deep (approx. 1,215sq ft x 8in deep), one clay island 7sq m (approx. 75sq ft) and a grassed area 470 sq m (approx. 5,000sq ft), planted with ornamental shrubs and trees, such as *Ficus* sp. (Moraceae), *Oreodoxo oleracea* (Palmae), *Sanchesia nobilis* (Acanthaceae), *Eugenia sprengelii* (Myrtaceae), *Impatiens walleriana* (Balsaminaceae), *Zantedeschia aethiopica* (Araceae) and *Cuphea gracilis* (Lythaceae). The enclosure is surrounded by a 1.4m (approx. 4ft 9in) high fence.

The enclosure contains three Scarlet Ibis, 10 Chilean Flamingos *Phoenicopterus chilensis*, one Cayenne Ibis *Mesembrinibis cayennensis* and a few White-faced Whistling Ducks *Dendrocygna viduata* and Fulvous Whistling Ducks *D. bicolor*.

Diet

At Bela Horizonte Zoo the Scarlet Ibis are given minced (ground) meat, minced fish and dog ration. They are fed 300g (100g per bird), once a day at 14.00hrs (2.00pm).

The red colour of the Scarlet Ibis' plumage is an important factor in inducing reproduction (Sick, 1997). The pigment cantaxanthin (carotenoid) must be added to their diet to prevent the gradual loss of this colour, but when this pigment is stored in large quantities in the liver, it can be very harmful to the liver (Saad pers. comm.). At this zoo the ibises are given 10g per day of a natural red pigment extracted from the urucum plant *Bixa orellana* (Bixacea). This plant provides carotenoid pigments less harmful than cantaxanthin.

The nest

As the enclosure is open at the top, the ibis are pinioned and therefore nest on or near the ground, whereas in the wild, nests are built in treetops. The nests are twig platforms (Sick, 1997), with dried and fresh leaves also being used in their construction (Antas, 1979). The nests are, in general, 45cm (approx. 18in) in diameter (Olmos & Silva, 2001).

At Bela Horizonte Zoo both the male and female participated in nest construction (two nests in total) (see photos p.167). Generally, the male carried twigs to the female, which effectively built the nest, though eventually, he too was seen carrying twigs.

One of the nests was built 10cm (approx. 4in) above the ground and was 30cm wide x 16cm high (1ft wide x 6¼in high). The other nest was built directly on the ground and was 29cm wide x 27cm high (approx. 11½in wide x 10½in high). Both were built beneath a *Sanchesia nobilis* (Acanthaceae) shrub. The nests were difficult to observe, being visible only from a short distance. They were built 1.5m (almost 5ft) from each other.

The first nest was built in October 2001, and three eggs were laid in November. The second nest was built in January 2002 and, again, three eggs were laid. These disappeared from the nest in February, after which two more eggs were laid that month. Following the disappearance of the earlier eggs, a trap was set in the enclosure in the hope of capturing the cats, opossums (Didelphidae) or lizards *Tupinambis* sp., which may have taken the eggs.

*Cynthia Cipreste*

The nest was a platform of twigs and dry leaves

*Cynthia Cipreste*

The chick was covered with black down, had a short, straight bill and its eyes had not yet opened

Eggs

The eggs are greenish with dark brown markings, the shade of green and the distribution of the markings varying. The eggs are oval in shape with one end slightly narrower (see photos p.167). Clutch size varied from two to three eggs, with three being more common. The eggs were laid usually at two day intervals. To avoid the danger of desertion only one egg was measured; it was 53mm x 34mm.

The young and parental behaviour

The incubation period varied from 24-25 days, as cited by Antas (1979) and Sick (1997). It was not possible to determine the intervals between hatches because only one egg hatched in each clutch, producing two nestlings. These had black down, straight short bills, black at the tip and base, with a median white-reddish stripe and bluish edges and the eyes were closed, characteristic of altricial birds (Pough et al. 1993) (see photo p.167).

Outside the breeding period, the Scarlet Ibis is a shy bird. Flight is the main defence. There is a pecking order within the colony. During the breeding season, the behaviour changes and nests are defended against other ibis and anyone who disturbs the nest site. The bill is effectively used in a pincer movement and the nest is abandoned only as the last resort, the bird remaining nearby and returning as soon as possible. After the chicks have hatched, the protective instinct becomes even stronger and some birds will attempt to remain on the nest even when handled (Antas, 1979).

At BH Zoo, nest protection was undertaken mainly by the female. Antas (1979) described this behaviour as having been undertaken by the male, which when the female "squeaked", immediately returned and defended the chick. The opposite behaviour was observed here. When the female began to "squeak", the male ran away from the nest site, leaving the chick and female alone. The female abandoned the nest only when touched by a keeper.

By two weeks old, the young had already moved off the nest and were hiding among the vegetation, where they remained immobile. The young were fed by regurgitation and parental care continued for 40 days in the case of the first chick and for 44 days in the case of the second, after which the young began to feed alone and to explore the enclosure.

The immature ibis (at one month old) is blackish, except for the underparts and rump which are white. The bill is now long and curved, just like that of the adult.

Discussion

At BH Zoo the reproductive period extended from October-February and not April-July as described by del Hoyo et al. (1991). Although Scarlet Ibis breed in large colonies, the number of individuals does not seem to be a

limiting factor, as here at Belo Horizonte we had only two males and one female. Neither did the plumage colour seem to be a limiting factor to reproduction, as the Belo Horizonte birds lack bright red plumage and instead are a faded pinkish colour.

According to del Hoyo et al. (1991), in the tropics the main factor that induces nesting is not well understood, but it is usually related to hydrological patterns (availability of food for the development of the chicks) and varies between the different species. At BH Zoo, reproduction occurred in the rainy season (September-May), which concurs with del Hoyo et al. (1991).

The zoo's breeding pair laid three clutches during the one reproductive period. This number of clutches was also cited by Antas (1979) for captive birds, and by Olmos & Silva (2001) for wild birds.

It is hoped that, in spite of the initial failures, breeding in captivity can play an important role in the recovery of this species (del Hoyo et al. 1991). The reproduction in captivity of threatened species can provide an efficient tool for conservation projects, for educational programmes and for collecting biological data.

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FOURTEENTH HARPY EAGLE CHICK AT NUREMBERG ZOO

At Nuremberg Zoo, Germany, the fourteenth Harpy Eagle *Harpia harpyja* has been hatched, 10 (8.2) of which have been reared to independence.

Back in 1980, Nuremberg Zoo received a pair of Harpy Eagles from a private falconry collection. The first chick hatched in 1984, but died shortly afterwards. The male chick hatched in July 1986 was the first to be successfully reared by its parents and the following year went to Antwerp



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The photo above, taken August 8th 2002, shows the female Harpy Eagle hatched at Nuremberg Zoo in July 1992 and hand-reared there, acting as foster-mother to the chick hatched earlier in 2002

Zoo, Belgium. The parents reared their young only in the years 1986-1987; other chicks have been hand-reared. Birds reared at Nuremberg Zoo have also gone to Wuppertal, Dortmund, Mallorca (the former breeding station belonging to Vogelpark Walsrode), Prague, Tierpark Berlin and São Paulo Zoo.

It was at Tierpark Berlin that the first captive breeding occurred in 1981, altogether four young were reared up until 1986, after which further breeding attempts were unsuccessful. In 1997, following an exchange of partners between two pairs in the collection, the original breeding male was killed by the female.



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Keeper Martin Gelsendörfer feeding the chick while its foster-mother looks on. The chick received two feeds a day, one given by Martin in the morning, who in the afternoon fed the female, which then passed the food to the chick

As well as at Tierpark Berlin and Nuremberg, the Harpy Eagle has been bred at Los Angeles, San Diego, the Peregrine Fund's World Center for Birds of Prey (Boise, Idaho, USA) and in Panama at the Neotropical Raptor Center.

At San Diego Zoo, at least one egg has been laid every year for the past eight years, and two of the birds reared there have been released back into the wild. At Boise, two females laid seven eggs, six of which were fertile and three of which hatched, from which two young survived in 2001. Roberto Ascerado, Belo Horizonte, Brazil, is also said to be breeding Harpy Eagles, but no details are available.

BREEDING THE YELLOW-BREASTED MAGPIE

Cissa hypoleuca

by Neil Owen

Introduction

The genus *Cissa* can be somewhat confusing, as various authorities have over the years recognised from two (King, Dickinson & Woodcock, 1975) to six species (Delacour, 1929). More recent works (Goodwin, 1986 and Madge & Burn, 1999) consider that three is the most likely number.

Description

The Yellow-breasted or Eastern Green Magpie is a stocky bird measuring approximately 35cm (14in) long including the tail. Much of the plumage is green, including the tail, which has the outer feathers edged with black and white. The bill and legs are bright coral red, the toes are pink and the eyes are dark brown, surrounded by a narrow red orbital ring. There is a black mask from the base of the bill passing above and below the eyes to the nape. The crown and nape are green and these feathers are rather long and can be raised to form a crest when the bird is excited. The wing feathers are rich chestnut-brown with the secondary feathers tipped with pale green.

As with the other green magpies *Cissa* spp., the plumage can fade from a vivid pea green to a paler green, turquoise or even a very pale blue. The reasons for this are not totally clear, although it seems likely that the plumage fades because the birds are kept in bright sunlight for long periods and are unable to hide in thick undergrowth. It may also be related to their diet. In the wild green magpies have been seen feeding on bright green mantids, crickets and stick insects (A. Owen pers. obs.).

Distribution

The Yellow-breasted Magpie is found in tropical and sub-tropical evergreen hill and lowland forest, and at lower elevations its range often meets that of *C. chinensis*. The Yellow-breasted species is found in southern China and is widespread through Vietnam from south Tonkin to CochinChina and west into parts of Laos and south-east Thailand. There are also isolated populations on Hainan Island and the Yao Shan Hills of Guangxi in China. Five subspecies are recognised (Madge & Burn, 1999).

Voice

This species has a wide range of calls, some typically harsh and scolding alarm calls similar to those of the European Magpie *Pica pica*, as well as others which are quite musical and unusual. Both sexes whistle quite loudly,

particularly in the morning and also make a strange sound which is very similar to the “meeow” sound made by a cat. This sound is usually made by two birds calling together. They sing out in the open and when hidden in deep cover.

Accommodation

My birds are housed in an aviary measuring approximately 6m long x 2.5m wide x 2m high (20ft long x 8ft wide x 6ft 6in high). This has a wooden shelter attached in which the birds are fed and in which they can be shut in if the weather in the winter is severe. The back and part of the sides of the aviary have wooden lapped fence panels attached to provide privacy and some protection from strong winds. The roof is covered with corrugated Perspex (Plexiglas) to give protection from the elements and to prevent possible contamination from wild birds. Part of the roof is painted green and a section is covered with dark coloured garden mesh in an attempt to shield the birds from direct sunlight, which could affect the colour of their plumage. The aviary is planted with various shrubs such as laurels, clematis, ivy and a small conifer. There are several rotten logs on the aviary floor, where the birds spend a lot of time. The earth floor is covered with a thick layer of leaf litter, which is replenished regularly. A small concrete pond is used by the birds for bathing.

Diet

The basic diet consists of a universal mixture to which is added soaked mynah pellets, mashed hard-boiled egg, minced (ground) lean beef and various chopped fruits, although the latter are not very popular. A day-old chick, with the yolk sac removed, is given most days and occasionally a small mouse. A few mealworms or crickets are scattered around the aviary once a day. There is little doubt that the birds are mainly carnivorous, as the meat and chicks are always favourite items. Various insects and earthworms are found in the aviary and the birds become very excited if a small snail is caught.

Behaviour

Although there are times when they hide in the undergrowth, the birds are active a lot of the day and can often be seen sifting through the leaf litter, bathing or flying back and forth the length of the aviary. They are very inquisitive and usually come to investigate anything new, such as a new perch or a rotten log that I have turned over. Various objects such as stones are carried about and are often found in the food pots. One hot day I tipped a jar of ants and their eggs into the aviary and both birds came down to investigate, eating some of the eggs, but also spreading some through their plumage in typical Jay-like anting behaviour.



Andrew Owen

Adult Yellow-breasted Magpie *Cissa hypoleuca*
(see footnote p.177)

Breeding

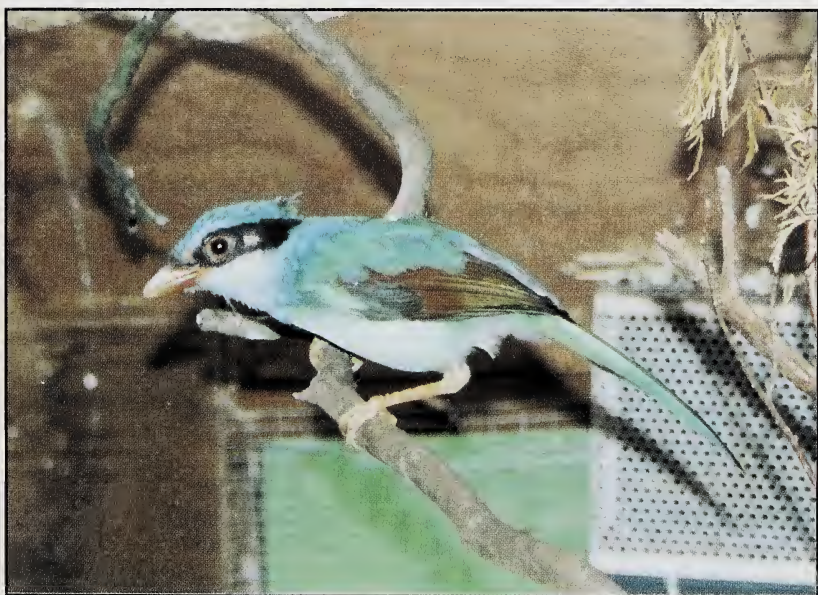
In the summer of 2000 I bought from a private aviculturist what I hoped was a pair of these birds. One was slightly larger and generally bolder than the other, this I took to be the male. After coming through a heavy moult in October the birds were in immaculate condition, although the smaller one was not such a vibrant green as its mate. They preferred to roost outside, but on very cold nights I shut them inside the shelter. In late January 2001 we had a few days which although cold were very bright and sunny and the male was seen offering mealworms to the female. She did not appear interested and as the male then began chasing her around the aviary while whistling loudly, I decided to move him to another aviary for a while. As soon as they were parted both birds began calling to each other but I decided to keep the male separate for a week, in the hope that he might calm down. When the pair was reunited the male was less boisterous and the pair seemed more compatible.

In early March I provided several potential nest sites, including a wooden platform high up in the aviary and hidden by conifer branches, a wire basket fixed in a laurel bush and a 30cm (10in) wicker basket placed low down in a small conifer tree. As the weather warmed up both birds became more vocal; in fact the singing was so loud and so similar that I thought I might have two males. However, the larger bird once again offered mealworms to



Aged 18 days

Andrew Owen



Aged one month

Andrew Owen

the smaller bird and this time they were accepted.

I began offering more varied livefood including not only mealworms but crickets, waxmoth larvae, locusts, and occasionally a 'fuzzy' mouse (a young mouse with soft velvety fur). I also scattered around the aviary floor twigs of various sizes and some coconut fibre. The female was later seen carrying coconut fibre but both birds were getting more secretive and observing them was not easy.

One morning when I was cleaning the pond, I had a look in the conifer where the birds were spending a lot of time, and was delighted to see a completed nest in the wicker basket. It seemed to be made mostly from coconut fibres with a few dried leaves woven into it. On May 10th I went in to feed the birds and as both were in the shelter, I was able to look in the nest which now contained two eggs, these were very pale blue with brown speckles at the thick end.

The male was spending a lot of time in the shelter and I assumed and hoped that the female was sitting, but observations were difficult as there was more vegetation at this time of the year. On May 28th both birds were away from the nest calling in alarm. I checked the nest and was relieved to see that it now contained four eggs. The female went back as soon as I left the aviary. At the morning feeding time on June 3rd both birds were again briefly shut inside the shelter. I checked the nest and was delighted to see a newly hatched chick. I swiftly left and returned with a handful of newly sloughed mealworms, small waxmoth larvae and small crickets, these having been lightly dusted with a 'stress' vitamin and mineral supplement.

Two days later a second chick hatched. I watched the female fly down to bathe and the male go straight to the nest. Due to the thick vegetation it was difficult to see if he was feeding the chicks or brooding them, but he seemed to stay for a long time. As some corvids are known to eat their young, I was concerned. However, I thought it best to keep disturbance down to a minimum.

On June 9th I found an egg on the floor of the shelter (presumably removed from the nest by one of the birds). This was found to be infertile. It measured 31.6mm x 22.9mm. The adults were taking mainly waxmoth larvae and 'fuzzy' mice but not in the huge amounts I had anticipated, in fact there was often livefood from the previous day left in the pots. While the adults were away feeding on June 12th, the nest was checked and still contained two chicks which by then were covered in pin feathers. The fourth egg had disappeared. I was by then giving six 'fuzzy' mice, one chopped day-old chick and a few waxmoth larvae, hardly anything else was being eaten. I was unable to check the nest for the next week as both adults had become aggressive and attacked me whenever I entered the aviary.

On June 22nd the adults seemed quieter and I was able to approach

close enough to see the chicks, which by then almost filled the nest. Both were fully feathered. They were blue with dark brown wings and had the distinctive black eye stripe. The preferred food remained 'fuzzy' mice (10 a day) and waxmoth larvae. Locusts and crickets were ignored but small pieces of day-old chick were taken to the nest.

Both chicks left the nest on June 28th and were well cared for by their parents and were first seen feeding themselves four weeks after leaving the nest. Two months later they were removed to their own aviary. The adults did not attempt to re-nest and soon afterwards went into a moult.

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Neil Owen, who lives in Carmarthenshire, Wales, is interested to hear from anyone in the UK who keeps the Yellow-breasted Magpie. His telephone number is: 01558 668336.

As described above, the Yellow-breasted Magpie *Cissa hypoleuca*, has been bred by Neil Owen. This is probably the first successful breeding of this species in Great Britain or Ireland. Anyone who knows of a previous breeding is asked to inform the Hon. Secretary.

Footnote

Surprised that the bird in the photo has a green rather than a yellowish breast, I consulted Crows & Jays by Madge and Burn (Christopher Helm/A & C Black, 1999) and decided that it must belong to one of the two isolated Chinese subspecies, probably C. h. jini, described as: "relatively longer-tailed and greener below than other races." Though I must say that the example depicted on Plate I6(4b) has a paler green breast than the bird in the photo.

Later, when doubts were expressed over the identity of the bird in the photo and Roland Cristo was quoted as having said, it is "definitely chinensis" (the Green Magpie or Hunting Cissa), I contacted Neil Owen and asked if he had any photos in which the tertials (inner secondaries) can clearly be seen?

He has provided me with photos which show that the tertials are broadly tipped light green (without any black or white markings) a diagnostic feature which distinguishes C. hypoleuca from C. chinensis. The two-colour pattern on the tertials and the length of the tail of the bird in the photo also seem to rule out C. thalassina (the Short-tailed Magpie), sometimes considered conspecific with the Yellow-breasted, which Madge and Burn treat as a separate species, on account of the latter's "striking vocal differences" - Ed.

AVICULTURAL SOCIETY TO HELP FUND FURTHER RESEARCH

Having recently adopted a pair of Bushy-crested Hornbills *Anorrhinus galeritus* living in the wild in Thailand (see *Avicultural Magazine* 108,2:89 (2002)) as part of its policy of becoming more actively involved in conservation and research, the Avicultural Society has now taken the decision to help fund a research project on the Yellow-throated Laughingthrush *Garrulax galbanus* in China. It is a project that is already well established and has the full support of the Chinese Government, local forestry authorities and the local community.

In European collections since the late 1980s there have been several apparently self-sustaining populations of the Yellow-throated Laughingthrush. It is far from clear, however, how these birds were imported and from where. An exhaustive search of customs documents relating to birds exported from China failed to find any records of this species.

In the early 1990s, when concern grew as to the status of the two subspecies which occur on mainland China - *G. g. courtoisi* and *G. g. simaoensis* - the Munich-based German conservation organisation ZGAP, provided grants to Chinese colleagues to investigate the status of the wild populations of these two Chinese forms. It required successive field surveys over a seven year period though before, in the 2000 breeding season, *G. g. courtoisi* was finally rediscovered in the wild in Wuyuan; *G. g. simaoensis* has yet to be rediscovered.

During field observations in 2000, a total of 80-90 birds were counted, in two breeding flocks approximately 40km (about 25 miles) apart. Although researchers obtained a rudimentary understanding of the breeding biology and habitat selection of the birds, all that could be said about their status was that they appeared to be extremely rare. However, following field work in 2001, when two more breeding sites were found, a more integrated picture emerged, making it possible to outline the breeding range and status of *G. g. courtoisi* in Wuyuan.

They breed in flocks, close to rivers. All four breeding flocks found so far have been around villages, very close to villagers' houses, and the 20 or more nests found have all been in the canopy of mature trees. The cinnamon trees are traditionally protected by the villagers at these sites and with their cooperation, the local forest office has declared the breeding sites mini-protected areas.

From the limited data available at present, it is known there are 150-160 *G. g. courtoisi* living in one small area. In accordance with the latest IUCN *Red List* Criteria 2000, on this evidence this subspecies qualifies as Endangered or quite possibly even Critically Endangered, taking account of

its presumed population size and range. Of the four breeding sites found, none is larger than 10 hectares (approx. 25 acres), which means that a very small area is supporting this breeding population.

Much remains to be learnt about *G. g. courtoisi*, for example, we know nothing about where the birds go and what they do during the non-breeding season. Shortly after the young are able to fly, all the birds both young and adult, disappear into the hills.

Finding the wintering place/places of *G. g. courtoisi* is an important unresolved mystery. The quickest way to achieve this may be to fit some of the birds with tiny radio transmitters, and this could be one of the things for which the funding is used.

Prof. He Fen-qi, Academia Sinica, Beijing, is happy for the society to publish in the magazine material and photographs from the project.

* * *

SUCCESSFUL SCANDINAVIAN SYMPOSIUM

A symposium on the Omei Shan Liocichla *Liocichla omeiensis*, attended by keepers from Denmark and Sweden, was held August 3rd 2002, at Copenhagen Zoo, Denmark, reports John Sidor.

As a European Studbook has recently been established for this species, it was felt there was the need to attempt to find answers to a number of questions. How will it work? How can private keepers participate? How to adapt to the ways of management of non-commercial zoos? And many other questions.

Flemming Nielsen of Copenhagen Zoo, gave a very interesting talk about studbook keeping and related issues, and there were constructive discussions, which produced helpful suggestions and initiatives.

The main outcome was:

1. All keepers agreed to follow the recommendations of the Studbook Keeper (Nigel Hewston, UK (e-mail:nigelhewston@supanet.com)).
2. Work towards obtaining official import/export permits from/to Sweden and the UK.
3. Set-up a website for the exchange of information.
4. Plan an international meeting in 2003, to which German and British ESB (European Studbook) members should also be invited.

LETTERS TO THE EDITOR

Derek Goodwin writes: I read with great pleasure Philip Schofield's interesting and informative article on the Mandarin Duck *Aix galericulata* (Vol.108, No.2, pp.52-58 (2002)) and fully agree with what I infer are his implied criticisms of the present laws (here in the UK), especially as they affect introduced species and aviculture.

I should like to comment further on some of the subjects in his article.

Introduced species

The attitude that is now considered officially correct and endorsed by the law is that these should be considered unwanted "aliens" (note the pejorative word "alien"). It is now illegal to liberate any more, unless that is they are of use for blood sports.

Thus any augmentation of our tiny populations of the Golden and Amherst Pheasants *Chrysolophus pictus* and *C. amherstiae* is a criminal offence. Both are uniquely beautiful, with limited world ranges, in which both would seem doubtfully secure and which (Lever, 1987) appear not to have been successfully naturalised anywhere else in the world except in Britain, in spite of many attempts to do so. Yet the Common Pheasant *Phasianus colchicus* which has an enormous natural range and has been successfully introduced into the USA, New Zealand, Hawaii and much of Europe, may be (and is) yearly liberated in thousands here in Britain, even in places still inhabited by the decreasing Black Grouse *Tetrao tetrix* with which it may compete (Lever, 1977 & 1987; pers. obs.).

Obviously the pleasure of those who enjoy shooting beautiful birds for sport carries more weight with those in authority than does that of those who enjoy watching living birds. Ornithological writers and presenters of TV programmes on birds in recent decades seem to have been mostly in favour of the shooting of gamebirds and waterfowl for sport, though fiercely condemning poor people in other countries who kill songbirds for food or kill birds of prey that take their chickens. Though I and others recently had a delightful surprise when, on TV, Bill Oddie courageously stated his disagreement with the Ruddy Duck *Oxyura jamaicensis* massacre now (I write in July 2002) in progress here in the UK.

Usually, any concern for the status of introduced species is at least implicitly condemned and their destruction heartily approved. See, for example, the comments on the Ruddy Duck and the Golden and Amherst Pheasants in *The State of the Nation's Birds* (Mead, 2000). A book well worth reading even if (or perhaps especially if?) one finds, as I did, that one strongly opposes some of the author's opinions.

Yet, although the introduction of any species, however beautiful,

interesting, and in need of 'a second home' it may be for conservation reasons, is forbidden in case it *might* do harm, the reintroduction of the White-tailed Sea Eagle *Haliaeetus albicilla*, Red Kite *Milvus milvus* and Goshawk *Accipiter gentilis* has been officially brought about - in the case of the first two and apparently with official connivance in the case of the third species - despite the fact that when and where they were abundant they were usually considered harmful.

It seems at least probable that the absence or almost complete absence of the Goshawk in Britain for the past 150 years or more was what enabled the Mandarin Duck and the Golden and Amherst Pheasants to become established (the pheasants only in small numbers in a very few places) in Britain and its presence part or whole of the reason for the failure of attempts to establish them elsewhere in Europe.

Ironically it appears (Shurtleff and Savage, 1996) that the only country other than England, in which the Mandarin Duck has been successfully naturalised is the USA. The one country where there would seem to have been justifiable objections to its being released for fear that it might compete with the Wood or Carolina Duck *A. sponsa*, its only close relative and one with similar habitat requirements. Fortunately it does not, so far, seem to have had any adverse effects on the Wood Duck.

Aviculturists should, I believe do all they can to maintain viable captive stocks of these three species. Despite official hostility now, things might well improve. I know that many people are very much against the present attempt to exterminate the Ruddy Duck in Britain, for example. They would, I think, be even more appalled if, as I fear is likely to happen, the appetite for killing beautiful living birds grows once the Ruddy Ducks have all been killed, and those involved should decide that the Mandarin Duck must go too.

However, things may change in the future and if aviculturists have managed to preserve viable stocks of Golden and Amherst Pheasants which have not been bred, deliberately or through default, for larger size or physical deformities, at some future date they might be able to supply birds to augment any dwindling stocks of already naturalised birds and/or start new populations.

Opponents of aviculture often state that only wild-caught birds (or other animals) can successfully establish themselves in a feral state. This is not true. Admittedly the many modern grossly deformed show specimens of many breeds of pigeons, canaries, chickens, ducks (of both Mallard *Anas platyrhynchos* and Muscovy *Cairina moschata* origin) cannot long survive in a truly feral state and the same is true of domestic mammals. We know, however, that in many parts of the world species that have been domesticated for hundreds or even thousands of years - dogs, horses, camels, goats,

donkeys, water buffaloes, chickens, pigeons *Columba livia* - have, when given the chance, successfully become naturalised, often in spite of man's heavy predation of them.

As I have pointed out in several letters and articles sent to official and semi-official organisations, it is not true that all introduced life forms have proved harmful to native bird species, many introduced plants and trees have provided new supplies of food for many native species. Also that self-introduced 'new' species, usually welcomed with protective legislation, are more likely to pose a threat to native birds than non-predating exotic species.

I have also protested against the, now well underway, official plans to either exterminate Britain's Ruddy Ducks or to reduce them to a pitiable constantly persecuted remnant within the next 10 years. Not surprisingly only two of these communications have been published, both in *British Birds*, one (Goodwin, 1992) was reduced by about 80% but the other (Goodwin, 2000) which was in reponse to a very anti-aliens article (Bibby, 2000) with only about 10% of the original deleted. The same issue of *British Birds* which contained my letter on the subject contained another shorter but very readable and witty letter of protest (Lawson, 2000). It also contained a letter from the RSPB's Director of Conservation (Avery, 2000) in which it was suggested that legislation should be passed so that the costs of exterminating alien species should be borne by those who released or lost them.

It would, I suggest, be more justifiable if those responsible for reintroducing the Goshawk, White-tailed Sea Eagle, even perhaps the Red Kite, should have to pay for all the free range poultry and pigeons killed, and other damage done by these birds. What about payments to the descendants of those who enriched our lives by successfully introducing the Mandarin Duck and, if modern DNA and other magical-seeming scientific studies could identify them, the descendants of those who first brought the domesticated Red Junglefowl *Gallus gallus* (the chicken) to Britain and those who first introduced here and elsewhere that glorious bird the Blue or Indian Peafowl *Pavo cristatus*?

I recall that a line in one of Frank Finn's verses, published long ago in the *Avicultural Magazine*, ended:

"But I the Peacock lord it yet
Lest Man God's glory shall forget!"

Even those like myself, who do not believe in the existence of a single, all-powerful God as described by the main monotheistic religions, cannot and I think should not, look at the "Peacock in his pride" without a feeling of awe, delight and gratitude to those who disseminated this bird so widely throughout the world, albeit in a semi-domesticated state.

Law and aviculture

There can be no doubt that the law in Britain (and also in many other countries, especially Australia and the USA), has been in the main hostile to those aviculturists who are ordinary in the sense of not being government officials or very rich and very influential. In the past, as now, legitimate sport (shooting gamebirds and waterfowl primarily for pleasure) and those forms of bird-keeping primarily indulged in by the rich and powerful (though not always only by them), such as the keeping of waterfowl collections and falconry, were looked upon very much more favourably by the law than the keeping of other birds by those wishing to study them or keep them as pets. Peter Scott's (1936 & 1939) early and still very evocative books made it clear that the capture of wild geese to keep them alive was as legal as the shooting of them.

I do not know what precisely is the law regarding birds of prey but certainly whereas the aviculturist whether for pleasure or study (or both combined) may not release any exotic species, not even the provenly harmless, beautiful and long-established Mandarin Duck, both commercial organisations that show free-flying birds of prey, both British and exotic, to paying visitors and individual falconers, often with such exotics as the Harris Hawk *Parabuteo unicinctus* on fist, are permitted to allow their birds to fly free.

Admittedly, though not always realised by admiring members of the general public, the raptors are not in either case set at liberty unless they are thought (not always correctly) to be in such a state of hunger that they will return to the lure when their owners wish them to. However they are not always hungry enough. I have seen an obviously gone wild Lanner Falcon *Falco biarmicus* near Chichester, a neighbour of mine once saw a Harris Hawk in his garden, and Newton's 1986 monograph on the Sparrowhawk *Accipiter nisus* has a photo of an escaped Goshawk, still with the remains of the jesses on her legs successfully breeding in the wild.

Those interested in bird behaviour will know the enormous amount of scientific information that has been amassed when and where it was legal for private individuals to keep exotic (and native) species free-flying. Such famous names as Delacour, Finn, Heinroth, Lorenz and Nicolai come immediately to mind, but regular readers of the *Avicultural Magazine*, especially those who have (like me) been lucky enough to have had access to pre-1940 and pre-1914 issues, will know that many less well known aviculturists also contributed much to our knowledge of bird behaviour. It has always seemed to me both unfair and not in the best interests of acquiring knowledge of bird behaviour or physiology *when the birds are not under stress*, that even, or perhaps especially, those countries with the most restrictive anti-avicultural laws for the ordinary person behave very

differently towards those in high positions in official or quasi-official organisations - conservational (sic), scholastic, medicinal, or in some cases merely commercial.

Such people, often with little real interest in, and certainly no compassion for or sympathy with birds are given *carte blanche* to capture, experiment with or kill virtually unlimited numbers, even of rare or localised species.

Sometimes, when people with real knowledge of birds have been involved, for example Oscar Heinroth, Jürgen Nicolai and the late and much missed Luis Baptiste, a great deal of information has resulted. In some other instances, however, little or nothing of any real use or interest has resulted from great numbers of birds having been cruelly treated or killed.

I will not give examples for fear of upsetting sensitive readers. Suffice to say that I have seen some grotty bird dealers' establishments both abroad and in England but I have never seen birds, other than domestic poultry, kept in *worse* conditions than I have seen in some official and prestigious organisations in Britain, the USA and Australia. In these cases poverty could not be pleaded as an excuse as it might be in the East End of London, Egypt or the Middle East.

Pinioning of waterfowl

This is a certain means of preventing a bird from ever flying and is commonly practised on captive waterfowl. It is said to have the advantage that the birds so treated can then be allowed their liberty on ponds, lakes, etc. and so lead a much more natural life than if they were confined in an aviary.

As Philip Schofield said, if pinioned birds are put on unfenced waters something will eat them or they will stray and come to a bad end. I recall that Frank Finn in one of his books, but I cannot find which at the moment, condemned pinioning and said owners who need to have their birds flightless should clip their wings. He more briefly condemned it in his book *Familiar London Birds* (p.129).

I agree. In either case the flightless bird is at a disadvantage when, as too often in public parks and waterfowl collections, it has to compete with, fight with or escape from other birds that are full-winged. But the pinioned bird is worse off even in such situations as it is unbalanced. It cannot 'fly' underwater, as many ducks do to escape attacks by birds of prey or aggressive fellow captives. Also, when suddenly frightened or if impelled by the urge to migrate or to accompany a full-winged companion, pinioned waterfowl will often leap into the air, only to lose balance, spin round and fall with a splash if on water but often heavy enough to injure the stump of the mutilated wing if they do it often on hard ground.

Aesthetically, in my opinion, pinioning greatly detracts from the beauty

of any bird that has been so treated. Even more so, at least when the bird is very close to one, than do the coloured leg rings (now known to affect the bird's sexual attractiveness in at least one species, the Zebra Finch *Taeniopygia guttata*!) and which both aviculturists (myself included, in the past) and scientists widely use and the very unsightly wing tabs and back tabs used by scientists studying raptors and gamebirds.

It is claimed that these and the various modern gadgets such as radio transmitters on Black Grouse, bulky collars for the same purpose on Snow Leopards *Uncia uncia*, etc., used by those studying these creatures, do not incommode them in any way. This I rather doubt.

In conclusion

I think that aviculturists, who are in the position to do so, ought to try to maintain stocks of beautiful and relatively easily kept and bred species and encourage others to do so. And to try to ensure that breeding for show does not, as it has with the Budgerigar and many breeds of Canaries and domestic pigeons, result in the production of malformed, physically handicapped and often downright ugly creatures *and* in normal sized and shaped examples of their species becoming worthless and despised by those supposed to be experts, and therefore no longer bred.

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NEWS & VIEWS

NEW BREEDING PAIRS

The St Vincent Parrot Conservation Consortium (SVPCC) is spearheading a new strategy regarding the captive population of the St Vincent Parrot *Amazona guildingii*. The aim is to form several new pairs from among those birds living in overseas collections. To this end, the Loro Parque Fundación, Tenerife, has received a female from Houston Zoo, Texas, to pair with its lone male. Vogelpark Walsrode, Germany, has transferred two males to Peter Hammond in the UK, to allow his male to choose a partner and Toronto Zoo, Canada, is sending its single female to Avicultural Society Vice President Dr Henri Quinque, who has three males and a female in his private collection in France.

* * *

THREE POSSIBLE WORLD FIRSTS

Having in 1995 become the first collection to breed the White-tailed Trogon *Trogon viridis*, Vogelpark Walsrode/ Germany has now succeeded in breeding three more species of trogon, the Javan *Apalharpactes reinwardtii*, Red-headed *Harpactes erythrocephala* and Diard's *H. diardii*. Because trogons have weak feet and would probably have difficulty getting out of deep nest-boxes, the boxes must not be very deep and are filled to the top with wood shavings, which the birds remove until a slight depression is formed just below the entrance hole, for they seem to like to be able to look out of the hole while sitting.

* * *

FOR THE FIRST TIME

Loro Parque, Tenerife, which on December 17th celebrated the 30th anniversary of its opening in 1972, earlier in the year for the first time in its history bred the Plum-faced Lorikeet *Oreopsittacus arfaki major* (a subspecies of the Whiskered Lorikeet), at first listed as the Plum-faced Lorikeet and now as the Greater Alpine Lorikeet. Also for the first time, it bred the Swift Parrot or Parrakeet *Lathamus discolor* and, it believes for the first time in any collection, *Brotogeris chrysopterus tuipara*, a subspecies of the Golden-winged Parrakeet, as well as the Morotai subspecies of the Chattering Lory *Lorius garrulus morotanius*. In the case of the latter, the two chicks from the first clutch were hand-reared and the two from the second clutch were reared by the parents.

New additions to the collection include the Aru Islands subspecies of

the Red-sided Eclectus *Eclectus roratus aruensis* and the Maroon-faced Parrakeet *Pyrrhura leucotis griseipectus* (a subspecies of the White-eared Conure). Other recent additions include two pairs of Josephine's Lorikeets *Charmosyna josefinae* from a German breeder, two female *Bolborhynchus aurifrons robertsi* from a Swiss breeder and a pair of Triton Cockatoos *Cacatua galerita triton*.

* * *

BOB GRANTHAM

It is with deep regret that I report the death on December 2nd, of a dear friend, Bob Grantham, the well known parrot breeder. Bob, who had been ill for some time, bore his illness with dignity until the very end.

I first met Bob over 40 years ago at another birdkeeper's home in Hertfordshire, and we soon became good friends. Bob was a second-generation birdkeeper, his father having kept birds before him. Bob started breeding birds in 1926 at the age of 10 when his father built him an aviary for some canaries in the garden of the family home in New Barnet, Herts., the home in which he lived until his death.

Until the 1960s, Bob exhibited a variety of species of foreign birds, two of which, a Tacazze Sunbird and a Turquoise-naped Chlorophonia took leading awards at the Foreign Bird League club show in the early 1960s. Parrots were however, Bob's first love, and he kept and successfully bred numerous species ranging in size from Australian grass parrakeets to lories and lorikeets, cockatoos and Amazons. Bob, and his second wife, Rosemary Low, were credited with breeding for the first time in the UK, the Bronze-winged Pionus, Cape Parrot, Yellow-shouldered Amazon, Duyvenbode's Lory and Meyer's Lorikeet, and more recently Bob succeeded in breeding the Purple-bellied Parrot. The Avicultural Society medal was awarded for each of these UK first breedings.

Bob had been an Avicultural Society Council Member for several years and had recently been re-elected for a further five year term. At the time of his death Bob was also the Southern Foreign Bird Club's Treasurer, a position that he had held for 35 years.

I for one will miss Bob's likeable and cheerful personality and extend sincere condolences to his two daughters, Anita and Lynne and their families, and his carer Julie, who cared for him so well in his last years.

Ron Oxley

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In *Birds of the World* (Austin & Singer, 1961), mention was made of the flock of Caribbean Flamingos *Phoenicopterus ruber ruber* living on the racecourse at Hialeah, Florida, USA. In the IPC part-work of the same name (Part 7, Vol.1, pp. 173-174 (1969)), mention was also made of the famous flamingos: “.....at Hialeah, near Miami, where a hundred strong, wing-clipped flock lives and breeds on an artificial lake constructed in the centre of a racecourse. This colony is a draw for many tourists, for whom an added attraction is the annual ‘flamingo derby’, when the entire flock is shepherded on to the racecourse and raced en masse around it.”

Well, it seems that the race track finally closed in 2001, but the colony of flamingos continues to thrive and now numbers more than 300 birds. Ron Magill reports (Conservation Hotline, *Wildlife Conservation*, Vol.105, No.6, November/December 2002) that Miami Metrozoo, working with the American Zoo and Aquarium Association and US Fish and Wildlife Service, was recently allowed to collect 60 eggs from the colony. Metrozoo retained some and distributed the others to Birmingham Zoo, Alabama, Fort Worth Zoo, Texas and Flamingo Gardens, Florida. The chicks hatched from these eggs will help rejuvenate their flocks, which have been experiencing low reproduction due to ageing birds and mortality.

When an egg is removed, the female flamingo will usually lay another, and within two weeks, most of the Hialeah birds had already laid again.



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